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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/082,842	02/21/2002	Albert G. Choate		4627

7590 12/04/2002

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EXAMINER

ALAVI, ALI

ART UNIT

PAPER NUMBER

2875

DATE MAILED: 12/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/082,842	CHOATE ET AL. <i>J.C.</i>
	Examiner Ali Alavi	Art Unit 2875

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 21 February 2002.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-10 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 21 February 2002 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the **collimating lenses** must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choate (US Pat. No 4,567,551) in view of Bourn et al (US Pat. No 6,238,060 B1).

Regarding claims 1-4, and 6-9 Applicant's own patent discloses the claimed invention including an objective lens assembly (15) disposed coaxially of the optical axis of an inspection device (16) for projecting thereto an image of the illuminated surface of a workpiece (s) spaced beneath and in registry with the assembly, a variable incidence oblique illuminator, comprising a housing (12) secured to and surrounding the assembly

(fig. 1), illumination means in said housing for directing an expanding cone of illumination toward the work piece coaxially of the optical axis, a focusing element (40) positioned between the housing and the work piece in the path of the cone coaxially thereof, and operative to redirect and focus the cone of illumination onto the surface of the work piece at a predetermined angle of incidence relative to the optical axis (see figures 1-2). However, the prior art of applicant does not show a means mounting the focusing element for limited movement longitudinally of the axis between the housing and the work piece, the element being operative to decrease the angle of incidence upon approaching the housing and to increase the angle of incidence upon approaching the work piece. The means mounting the focusing element is for adjusting the angle of light incidence on the object relative to the optical axis. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide means for adjusting the light incidence relative to the optical axis, since it has been held that the provision of adjustability, where needed, involves only ordinary skill in the art. *In re Stevens*, 101 USPQ (CCPA 1954).

Regarding claims 5 and 10, Choate reference '551 discloses the claimed invention except for the plurality of LEDs. On the other hand, Bourn discloses a machine-vision ring-reflector illumination system including a housing surrounded to the machine vision (camera) with a plurality of LEDs (231), and a plurality of mirror (221) to reflect the light onto an object for inspection. The examiner takes Official Notice that the use of LEDs is old and well known in the illumination art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute an LED

for the light source in the illumination system of Choate. One would have been motivated since LEDs are recognized in the illumination art to have many desirable advantages, including reduced size, high efficiency, low power consumption, long life, resistance to vibrations, and low heat production, over other light sources.

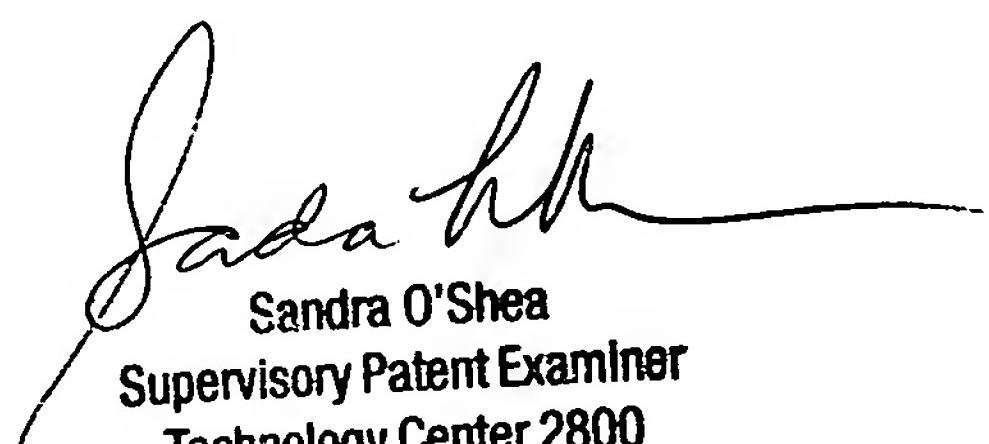
Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Smith et al (US Pat. No 5,951,139) discloses a surgical light with reflector lamps including an adjustment mechanism.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Ali Alavi whose telephone number is (703) 305-0522. The examiner can normally be reached between 8:00 A.M. to 4:030 P.M. Monday to Friday. If attempts to reach the examiner by phone are unsuccessful, the examiner's supervisor, Sandy O'Shea can be reached at (703) 305-4939 or you may fax your inquiry to the receptionist at (703) 308-7382.

Ali Alavi

11/28/02



Sandra O'Shea
Supervisory Patent Examiner
Technology Center 2800